Amendments to the Claims

1. (Previously presented) An ETC (electronic toll collection) system comprising:

an antenna having a predetermined directivity for providing a limited radio-communication service zone;

a vehicle sensor positioned at a location closer to oncoming vehicles than said antenna by a predetermined interval for detecting a vehicle which reaches a predetermined position in the limited radio-communication service zone;

first means for transmitting a radio signal via the antenna;

second means for deciding whether or not a radio response to the radio signal is received via the antenna;

third means for, in cases where the second means decides that a radio response to the radio signal is received, judging that there is an ETC vehicle incoming; and

fourth means for, in cases where the vehicle sensor detects a vehicle while the second means decides that a radio response to the radio signal is not received, judging that there is a non-ETC vehicle incoming.

2. (Original) An ETC system as recited in claim 1, wherein the first means comprises means for continuously transmitting the radio signal via the antenna.

3. (Previously presented) An ETC system as recited in claim 1, wherein the limited radio-communication service zone has a length greater than a length of a vehicle and smaller than twice the length of said vehicle.

4. (Original) An ETC system as recited in claim 1, wherein the limited radio-communication service zone has a length of about 6.5 m along a lane.

5. (Original) An ETC system as recited in claim 1, wherein the vehicle sensor is only one in the ETC system.

6. (Previously presented) An ETC (Electronic Toll Collection) system, comprising:

an antenna;

transceiver means working cooperatively with said antenna for outputting a radio signal at a given rating level to cover a limited radio-communication service zone;

a vehicle sensor positioned at a location closer to oncoming vehicles than said antenna by a predetermined interval for detecting whether a vehicle has reached a predetermined position in said limited radio-communication zone;

said transceiver means further working cooperatively with said antenna for detecting radio response to said radio signal from each vehicle detected by said vehicle sensor within said radio-communication zone; and

processor means for deciding a vehicle that has been detected by said vehicle sensor in said radio-communication zone is a non-ETC vehicle if no radio response to said radio signal is detected from said vehicle.

7. (Previously presented) An ETC system of claim 6, wherein said processor means decides a vehicle that has been detected by said vehicle sensor in said radio-communication zone is an ETC vehicle if a radio response to said radio signal is detected from said vehicle.

8. (New) An ETC system as recited in claim 1, wherein the antenna is one in number.

9. (New) An ETC system as recited in claim 1, wherein the antenna comprises a matrix array of antenna elements.

10. (New) An ETC system as recited in claim 6, wherein the antenna comprises a matrix array of antenna elements.